FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NO. 1614.1220

APPLICATION NO.

PATENT AND TRADEMARK OFFICE

FIRST NAMED INVENTOR

Shigemitsu AOKI, et al.

(Use several sheets if necessary)

LIST OF REFERENCES CITED BY APPLICANT

March 5, 2002

FILING DATE

U.S. PATENT DOCUMENTS

U.S. PATENT DOCUMENTS									
EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUB- CLASS	FILING DATE		
	AA								
	AB								
	AC								
	AD								
	AE								
	AF								

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSI YES	ATION NO
LD	AG	5-8483	02/1993	Japan		7		х
\	АН	5-70164	09/1993	Japan				Х
	Al	6-215744	08/1994	Japan			х	
	AJ	7-122168	05/1995	Japan	X	\	Х	
Y	AK	8-83627	03/1996	Japan			Х	
₩	AL	8-339752	12/1996	Japan		+	Х	

OTHER REFERENCES (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

AM	÷
AN	
AO	

EXAMINER	DONOVAN	DATE CONSIDERED 07-07-04

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.







FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

Sheet 1 of 1

ATTORNEY DOCKET NO. 1614.1220 10/087,849

FIRST NAMED INVENTOR

Shigemitsu AOKI, et al.

FILING DATE GROUP ART UNIT

March 5, 2002 2836

U.S. PATENT DOCUMENTS

OIO! TATEITI BOOGIIIE!TTO							
*EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
LD	AA	3,952,271	04/1976	Smirnov et al.	1		
(AB	5,239,202	08/1993	Hostetler		7	
	AC	3,218,406	11/1965	Gomperts et al.			
	AD	5,668,533	09/1997	Jackson, Jr. et al.		\bigwedge	
	AE	4,091,346	05/1978	Nishimura et al.			
1	AF	6,014,008	01/2000	Hartzell et al.		\	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSL YES	<u>ATION</u> NO
LD	AG	0 304 185	02/1989	European Patent Office			X	
しり	АН	100 48 880	04/2002	Germany	1			
	Al							•
	AJ			·				
	AK							
	AL							

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

AM

AN

EXAMINER	DATE CONSIDERED
DONOUAN	07-07-04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY DOCKET NO. 1614.1220	APPLICATION NO.
LIST OF REFERENCES CI	FIRST NAMED INVENTOR Shigemitsu AOKI, et al.		
/Lies coveral chapte it naceceany)		FILING DATE March 5, 2002	GROUP ART UNIT

U.S. PATENT DOCUMENTS

0.0117112111 0000111110									
*EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUB- CLASS	FILING DATE		
	ВА								
	ВВ				ļ <u>.</u>				
	вс								
	BD								
	BE					<u> </u>			
	BF								

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
W	BG	9-7478	01/1997	Japan		7	Х
1	вн	9-212757	08/1997	Japan			Х
	ВІ	10-12109	01/1998	Japan			X
	BJ	11-8942	01/1999	Japan			X
	ВК	11-232975	08/1999	Japan			X
	BL	2000-235828	08/2000	Japan			X
V	ВМ	2000-40452	02/2000	Japan			X

 C	OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)
BN	
во	
BP	

EXAMINER	NAVONS C	DATE CONSIDERED 07-07-04	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



U.S. DEPARTMENT OF COMMERCE

ATTORNEY DOCKET NO.

FIRST NAMED INVENTOR

March 5, 2002

Sheet 1 of 1 APPLICATION NO.

PATENT AND TRADEMARK OFFICE

1614.1220

10/087,849

LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

Shigemitsu AOKI, et al.

FILING DATE

GROUP ART UNIT 2836

U.S. PATENT DOCUMENTS

O.O. I ATENT DOCOMETTO							
*EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
LP	AA	3,575,678	04/1971	Barton			
	AB	4,284,904	08/1981	Tetro			
	AC	5,633,626	05/1997	Cawthorne	\rightarrow		
	AD	6,025,768	02/2000	Martich			
	AE	6,348,861	02/2002	Li			
	AF						

FOREIGN PATENT DOCUMENTS

FUREIGN PATENT DOCUMENTS							
	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSL YES	ATION NO
AG							
AH							
Al							
AJ							
AK							
AL							

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	O	_::-::	 10.0	7 =7		 	
		AM	·				
		AN					
ı							l

EXAMINER DONOVAN DATE CONSIDERED

07-07-04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ATTACHMENT 1(e)

EXPLANATIONS OF RELEVANCY OF REFERENCES

ATTORNEY DOCKET NO.	APPLICATION NO.
1614.1220	
FIRST NAMED INVENTOR	
Shigemitsu AOKI, et al.	
FILING DATE	GROUP ART UNIT
March 5, 2002	

Each of the references relates to background technology, and do not disclose or suggest patentable features of the present invention.

Japanese Reference AG relates to a proximity sensor 1 incuding a permanent magnet 3 having a through-hole extending in a direction of magnetization and yoke pieces 4A, 4B provided on both pole surfaces of the permanent magnet 3. In order to detect change of magnetic flux in the through-hole due to a magnetic body approaching the proximity switch, a lead switch 5 or an electro-magnetic conversion element is provided in th through-hole 2.

Japanese Reference AH relates to a direct-current vibrator including a cylindrical body 1 having a movable member provided with a permanent magnet 8 magnetized along the longitudinal direction and a weight 7, which cylindrical body 1 is supported at both end surfaces of the permanent magent 8 by an initial position determining spring 3 and a shock-absorbing spring 5 in a floated manner, a driving coil 2 wound around the cylindrical body 2 at the positin of thepermanent magent 8 and a lead switch 10 provided with a non-magnetic yoke 9 surrounded by soft magnetic material. Above-described elements are connected such that a repulsive force is produced by a magnetic field generated by the driving coil and a magnetic field generated by the permanent magnet.